

**AMENDMENTS TO THE CLAIMS:**

Amend the claims as follows:

1. (Currently Amended) A process for the production of a polyunsaturated fatty acid (PUFA), the process comprising culturing a micro-organism in a culture medium inside a fermentation vessel, whereby at a stage which precedes the end of fermentation;

[[a))] the carbon source is consumed by the micro-organisms at a rate greater than it is added to the medium;

[[b))] the carbon source is added at a rate of  $\leq 0.30\text{M}$  carbon/kg medium per hour;

~~e) the carbon source is rate limiting on the growth of the micro-organisms, or is restricted such that the micro-organisms metabolise fat(s) and/or lipid(s);~~

[[d))] the rate of addition of the carbon source is reduced or is below the rate of consumption of the carbon source by the micro-organisms; or

[[e))] the carbon source has been all used, or has a concentration in the medium of about zero, at or before the end of fermentation;

~~f) the carbon source addition is stopped but fermentation is allowed to continue; and/or~~

~~g) the micro-organisms are subjected to conditions whereby they metabolise, or consume, one or more fat(s) or lipids(s) in preference to arachidonic acid (ARA).~~

2. (Currently Amended) The process of claim 1, wherein:

[[h]] the concentration of the carbon source in that stage is on average  $\leq$  10g/kg and/or  $\leq$  0.17 M carbon/kg medium;

[[i]] the carbon source is glucose; and/or

[[j]] the PUFA is present in a microbial oil.

Claim 3. (Canceled)

4. (Currently Amended) The process of claim 1, wherein:

[[l]] the (entire) fermentation is carried out at a temperature  $\leq$  22°C and/or  $\leq$  30°C;

[[m]] the culture medium does not contain an additive oil; and/or

[[n]] the fermentation lasts no longer than 9 days.

5. (Currently Amended) The process of claim 1 wherein:

[[n]] the PUFA comprises arachidonic acid (ARA); and/or

[[o]] the vessel has a capacity of at least 10 litres.

6. (Previously Presented) The process of claim 1 wherein the micro-organism is *Mortierella*, optionally *Mortierella alpina*, and/or is non-genetically modified.

Claim 7-15. (Canceled)

16. (new) A process for the production of arachidonic acid (ARA), the process comprising culturing a micro-organism in a culture medium inside a fermentation vessel, whereby at a stage which precedes the end of fermentation, the rate of addition of the carbon source is below the rate of consumption of the carbon source by the micro-organisms.

17. (new) A process according to claim 16, wherein in said stage the micro-organisms are subjected to conditions whereby they metabolise, or consume, one or more fat(s) or lipids(s) in preference to arachidonic acid (ARA).

18. (new) A process according to claim 16, wherein in said stage the carbon source is added at a rate of  $\leq 0.30$  M carbon/kg medium per hour.

19. (new) A process according to claim 18, wherein in said stage the carbon source is added at a rate of at least 0.01 M carbon/kg medium/hour.

20. (new) A process according to claim 16, wherein the concentration of the carbon source in that stage is on average  $\leq 10$ g/kg and/or  $\leq 0.17$  M carbon/kg medium.

21. (new) A process according to claim 16, wherein the carbon source is glucose and wherein the rate of addition of glucose is less than 1.0 g glucose/kg medium per hour.

22. (new) A process according to claim 16, wherein:  
the fermentation is carried out at a temperature  $\geq 22^{\circ}\text{C}$  and  $\leq 30^{\circ}\text{C}$ .

23. (new) A process according to claim 16, wherein the micro-organism is *Mortierella*.

24. (new) A process according to claim 23, wherein the micro-organism is *Mortierella alpina*.

25. (new) A process according to claim 16, wherein the process is a submerged fermentation process.

26. (new) A process according to claim 16, wherein the ARA is present in a microbial oil.

27. (new) A process according to claim 26, wherein the microbial oil comprises at least 35% ARA.

28. (new) A process according to claim 27, wherein the microbial oil comprises at least 40% ARA.

29. (new) A process according to claim 16, wherein the microbial oil comprises at least 50% arachidonic acid (ARA).

30. (new) A process according to claims 26, wherein the microbial oil has a triglyceride content of at least 90%.

31. (new) A process according to claims 27, wherein the microbial oil has a triglyceride content of at least 90%.

32. (new) A process according to claims 28, wherein the microbial oil has a triglyceride content of at least 90%.

33. (new) A process according to claims 29, wherein the microbial oil has a triglyceride content of at least 90%.